

REMARKS

Claims 1-6, 8-18-and 20 are now in the case for examination.

Support for amended claims is found on paragraph 27 on page 7.

The rejection of claim 1-6, and 8-18 under 35 U.S.C. § 102(b) for being anticipated by the filter material of Melkersson et al., U.S. Patent No. 3,786,619, is respectfully traversed.

The Applicants' invention is directed to a method for removing metal, specifically mercury and cadmium (claim 4) from fluids, preferably flue gases and industrial gases. The Applicants' invention utilizes specific sorbents, iridium, palladium, ruthenium and iridium-platinum alloy. Applicants' invention functions at temperatures above 170°C, a temperature above the operating range of many other sorbents

Melkersson et al. are directed to a method for purifying gases containing gaseous mercury, by passing the gas through a mass of selenium-base material. Melkersson does not remove metals, in particular mercury and cadmium by the use of sorbents wherein the active metal sorbent is selected from the group consisting of iridium, palladium, ruthenium and iridium-platinum alloy, as not claimed by the applicants. Applicants argue that as the sorbent of the Applicants' invention is not disclosed or suggest by Melkersson, then the Applicants' invention is not anticipated by Melkersson and is novel, unobvious and clearly patentable over Melkersson.

The rejection of claim 1-20 under 35 U.S.C. § 102(b) for being anticipated by the filter material of Chao, U.S. Patent No. 4,474,896, is respectfully traversed.

As noted hereinabove, the Applicants' invention is directed to for removing metal, specifically mercury and cadmium (claim 4) from fluids, preferably flue gases and industrial gases. The Applicants' invention utilizes specific sorbents, iridium, palladium, ruthenium and iridium-platinum alloy. Applicants' invention functions at temperatures above 170°C, a temperature above the operating range of other sorbent. Applicants' invention is not direction to

polysulfide-base metal cation sorbent.

Chao is directed to sorbent compositions and their preparation for the adsorption of elemental mercury. Choa's disclosure comprises contacting a support material containing a metal cation capable of forming a water insoluble polysulfide. At column 5, lines 49-55, Choa lists the metal cations as:

"Metal cations believed to be employable in preparing the present adsorbent compositions include metal cations of antimony, arsenic, bismuth, cadmium, cobalt, copper, gold, indium, iron, irridium, lead, manganese, molybdenum, mercury, nickel, platinum, silver, tin, tungsten, titanium, vanadium, zinc, zirconium and mixtures thereof."

As Applicants' invention is not directed to a sorbent that is a mixture of a polysulfide and a metal cation, Applicants argue that as the sorbents of the Applicants' invention is not disclosed or suggest by Chao, then the Applicants' invention is not anticipated by Choa and is novel, unobvious and clearly patentable over Choa. Applicants note that while Choa mentions "irridium"[sic] (a questionable misspelling of iridium) at column 5, line 53, neither "irridium nor iridium appears elsewhere in the specification or claims. Therefore, Applicants submit that Chao does not teach the use of iridium or more specifically iridium polysulfide as a sorbent.

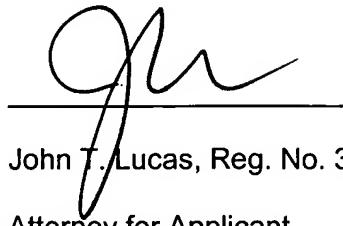
The rejection of claim 18-20, under 35 U.S.C. § 102(b) for being anticipated by the process for making filter material of Broecker et al., U.S. Patent No. 5,063,194, is respectfully traversed.

Broeker et al., are directed to the manufacture of a palladium catalyst, not to increasing the resistance of metal sorbents to chemical reaction, the process comprising alloying active metals. Applicants argue that as the sorbents of the Applicants' invention of claims 18 and 20 is not disclosed or suggest by Broeker, then the Applicants' invention is not anticipated by Broeker and is novel, unobvious and clearly patentable over Broeker.

CONCLUSION

The Applicants believe that the application, including claims 1-6, 8 -18 and 20, is now in allowable form. Allowance is therefore respectively requested.

Respectfully submitted,



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